

# Notice of Allowability

Application No.

09/996,836

Examiner

William C. Choi

Applicant(s)

MATSUMOTO ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 8/13/2004.
2. ☒ The allowed claim(s) is/are 1-5,9-13 and 16.
3. ☒ The drawings filed on 08 April 2002 & 13 November 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

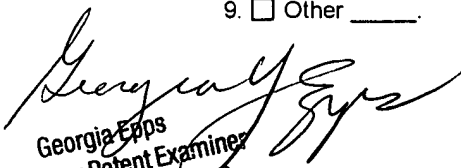
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800  
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Allowed Claims: 1-5, 9-13 and 16.

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 1, none of the prior art alone or in combination disclose or teach of a structure consisting of at least two layers of transparent dielectric containing via holes filled with a conducting material and a pattern of metal electrodes as claimed, specifically wherein the metal electrodes have at least a surface coated with a soldering metal or alloy, which, upon alignment of patterns, said layers are joined together, forming said structure by heating said soldering metal or alloy.

Specifically, with respect to independent claim 9, none of the prior art alone or in combination disclose or teach of a structure using metal filled via holes which permit to make vertical connections through individual transparent substrates from TFT's on a bottom plate to individual electrodes in at least two color cell levels as claimed, specifically further including metal walls in each pixel on each color cell level to provide a ground potential on a respective central electrode activated or deactivated by an applied potential from a respective TFT to collect or disperse said electrophoretic fluid.

Specifically, with respect to independent claim 10, none of the prior art alone or in combination disclose or teach of a structure using metal filled via holes which permit

to make vertical connections through individual transparent substrates from TFT's on a bottom plate to individual electrodes in at least two color cell levels as claimed, specifically further including metal walls surrounding each pixel and having holes on each side of said pixel to permit forming a meandering path for fluid whereby all pixels can be readily filled with the electrophoretic fluid or a liquid crystal (fluid) without entrapment of air bubbles at times when a vacuum is applied on one side of said structure.

Specifically, with respect to independent claim 11, none of the prior art alone or in combination disclose or teach of a structure using metal filled via holes which permit to make vertical connections through individual transparent substrates from TFT's on a bottom plate to individual electrodes in at least two color cell levels as claimed, specifically further wherein the electrodes are overcoated with a layer of dielectric to permit a potential large enough to collect or disperse electrophoretic fluid without discharging particles in said fluid.

### **CONCLUSION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W-C  
William Choi  
Patent Examiner  
Art Unit 2873  
August 23, 2004

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800